

IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (currently amended) A reactor for containing a solid catalyst for a heterogeneous gas-phase reaction said reactor being a fluid bed reactor comprising a grid, and into which reactor there extends more than at least one inlet pipe-pipes for a molecular oxygen-containing gas, in which, said inlet pipe having pipes have an outlet and surround means for surrounding a substantial portion of said inlet pipe-pipes in said reactor with an inert fluid, and further wherein the inert fluid surrounding the inlet pipe pipes is sealed.


2. (currently amended) A reactor as claimed in claim 1 in which at least 85% of said pipe-pipes in said reactor is-are surrounded by said surround means.

3. (original) A reactor as claimed in claim 1 in which said inert fluid comprises an inert gas.

4. (original) A reactor as claimed in claim 3 in which said inert gas is selected from the group consisting of nitrogen, carbon dioxide, helium, argon, neon, krypton and mixtures thereof.

5. (currently amended) A reactor as claimed in claim 1 in which said ~~surround~~ means for surrounding a substantial portion of said inlet ~~pipe~~-pipes in said reactor with inert fluid comprises ~~an~~ one or more outer ~~pipe~~-pipes surrounding a substantial portion of ~~at least one said~~ inlet ~~pipe~~-pipes for molecular oxygen containing gas in said reactor and provided with a supply of ~~insert~~ inert fluid.

6. (currently amended) A reactor as claimed in claim 5 which further comprises means for allowing for differential expansion of said inlet ~~pipe~~-pipes and said means for surrounding said pipe with inert fluid.

 7. (currently amended) A reactor as claimed in claim 1 which further comprises means for detecting a change in pressure of said inert fluid surrounding said inlet-~~pipe~~ pipes.

8-9. (cancelled)

10. (currently amended) A reactor as claimed in claim 1 in which each of said inlet ~~pipe~~-pipes further has means for suppressing ingress to the inlet pipe from the reactor of flame, reagents, products, catalyst or combinations thereof.

11. (original) A reactor as claimed in claim 10 in which said ingress suppression means comprises means for providing molecular oxygen-containing gas in said inlet pipe at a higher pressure than the pressure in said reactor.

12. (original) A reactor as claimed in claim 10 in which said ingress suppression means comprises a restriction to the outlet of said inlet pipe.

13. (original) A reactor as claimed in claim 12 in which said restriction comprises one or more orifices.

14. (original) A reactor as claimed in claim 12 in which said restriction is located at a distance from the outlet of said inlet pipe in the reactor such that a potential detonation is avoided.


15. (original) A reactor as claimed in claim 10 in which said restriction is located 4 to 5 pipe diameters from the end of the inlet pipe.

16. (previously amended) A reactor as claimed in claim 12 in which said restriction is located within a region of said inlet pipe surrounded by said means for surrounding said inlet pipe with inert fluid.

17. (cancelled)

18. (currently amended) A reactor as claimed in claim 17 1 in which the inlets are separated by a distance which is distance between inlet pipes is significantly in excess of potential flame length.

19. (currently amended) A reactor as claimed in claim 17 in which a said molecular oxygen-containing gas for said inlet pipes is provided from a common end box having an inventory.



20. (currently amended) A reactor as claimed in claim 1 in which each of said inlet ~~pipe~~ pipes is operably connected to a supply of molecular oxygen-containing gas provided through ~~at least one~~ or more flow restriction means which restrict the flow of molecular oxygen-containing gas to the inlet pipe.


21-46. (cancelled)

47. (currently amended) A reactor for containing a solid catalyst for a heterogeneous gas-phase reaction said reactor being a fluid bed reactor comprising a grid, and into which reactor there ~~extends at least~~ extend more than one inlet ~~pipe~~ pipes for a molecular oxygen-containing gas, in which, said inlet ~~pipe~~ pipes have ~~has~~ means for surrounding a substantial portion of said ~~pipe~~ pipes in said reactor with an inert fluid, and further wherein the inert fluid surrounding the inlet ~~pipe~~ pipes is provided with a limited supply of inert fluid sufficient to replace minor leaks.

48. (currently amended) A reactor as claimed in claim 47 in which at least 85% of the said ~~pipe~~ pipes in said reactor is surrounded by said surround means.

49. (previously added) A reactor as claimed in claim 47 in which said inert fluid comprises an inert gas.

50. (previously added) A reactor as claimed in claim 49 in which said inert gas is selected from the group consisting of nitrogen, carbon dioxide, helium, argon, neon, krypton and mixtures thereof.



51. (currently amended) A reactor as claimed in claim 47 in which said means for surrounding a substantial portion of said inlet ~~pipe~~ pipes in said reactor with inert fluid comprises ~~an~~ one or more outer ~~pipe~~ pipes surrounding a substantial portion of ~~one or more~~ said inlet pipes for molecular oxygen containing gas in said reactor and is provided with a limited supply of inert fluid.

52. (currently amended) A reactor as claimed in claim 51 which further comprises means for allowing for differential expansion of said inlet ~~pipe~~ pipes and said means for surrounding said ~~pipe~~ pipes with inert fluid.

53. (currently amended) A reactor as claimed in claim 47 which further comprises means for detecting a change in pressure of said inert fluid surrounding said inlet ~~pipe~~ pipes.

54. (currently amended) A reactor as claimed in claim 47 in which each of said inlet pipe pipes further has means for suppressing ingress to the inlet pipe from the reactor of flame, reagents, products, catalyst or combinations thereof.

55. (previously added) A reactor as claimed in claim 54 in which said ingress suppression means comprises means for providing molecular oxygen-containing gas in said inlet pipe at a higher pressure than the pressure in said reactor.

56. (previously added) A reactor as claimed in claim 54 in which said ingress suppression means comprises a restriction to the outlet of said inlet pipe.


57. (previously added) A reactor as claimed in claim 56 in which said restriction comprises one or more orifices.

58. (previously added) A reactor as claimed in claim 56 in which said restriction is located at a distance from the outlet of said inlet pipe in the reactor such that a potential detonation is avoided.

59. (previously added) A reactor as claimed in claim 56 in which said restriction is located 4 to 5 pipe diameters from the end of the inlet pipe.

60. (previously added) A reactor as claimed in claim 56 in which said restriction is located within the region of said inlet pipe surrounded by said means for surrounding said inlet pipe with inert fluid.

61. (cancelled)

 62. (currently amended) A reactor as claimed in claim ~~61~~ 47 in which the distance between inlets is significantly in excess of the potential flame length.

63. (currently amended) A reactor as claimed in claim ~~61~~ 47 in which said molecular oxygen-containing gas for said inlet pipes is provided from a common end box having a low an inventory.

64. (currently amended) A reactor as claimed in claim 47 in which each of said inlet ~~pipe~~ pipes is adapted to be operably connected to a supply of molecular oxygen-containing gas provided through one or more flow restriction means which restrict the flow of molecular oxygen-containing gas to the inlet pipe.

65. (cancelled)
